

black. The top of the head is pale yellowish, irregularly spotted with black; abdomen grayish; throat light reddish yellow; breast whitish. The legs are reddish chocolate, as also the bill at the base, the tip being a pale flesh color, and very blunt, having the appearance of being cut off squarely. While handling one of the chicks from which this description was taken it twice ejected considerable portions of a soft shelled crab. Another nest, containing one egg and two chicks; the chicks were younger than the one above described, and were of a generally darker color. The yellowish tinge of their down was also rather stronger in tone. The red ants had found them out and were troubling them, but they were probably too large and strong to be killed by them. I saw no dead ones. The chicks utter a chirping sound, repeated three times in succession.

The pleasure derived from the many instructive days which I have passed in companionship of these Terns has led me to prepare this contribution to the life history of these beautiful and interesting birds.



A SWALLOW ROOST AT WATERVILLE, MAINE.

BY ABBY F. C. BATES.

NOT FAR from where a small stream, called the Messalonskee, joins the Kennebec River, one may see at evening from the middle of July to about the third week in September, an interesting sight in the bird line.

The willow trees along the banks of this stream, particularly a close row some five or six hundred feet in length, form the roosting place of vast numbers of Swallows. During the forenoon and early afternoon very few Swallows are to be seen in the sky, — indeed they are conspicuous by their absence, — but a little before sunset the birds begin to arrive in the vicinity, flying, sailing, chasing each other around in the upper air, everywhere within eye's reach. From north and south, east and west, in they

come out of the distance till one thinks the barns, banks, martin-houses and swallow nests of whatever description all over Maine must have yielded up their inmates. Shortly after sunset they gather more nearly in the region directly above the trees, incomers from every point of the horizon still joining them and toward the last exhibiting great hurry and intentness, as if fearful of being "late to meeting."¹

Then begin the movements that are the most interesting feature of this gathering. At intervals *clouds* of Swallows will evolve something like order out of their numbers and perform *en masse* some of the most fantastic curves, spirals, counter-marches, snake-like twists and turns, with the sky for a background, that ever a company of genus homo executed on a finely polished floor. For instance, one evening they separated into two parts, one going to the right, the other to the left, each division making a grand circle outward, then joining again for a forward movement. There were some stragglers, but the figure was distinct and was twice performed, with other evolutions interspersed. Then a long snake-like movement from the upper air down very slightly inclined from the vertical, with two twists in it, a loop around a tall tree farther down the stream, and back, brought them into the tree-tops for roosting. That was the cleanest and most astonishing figure I ever saw them perform. Occasionally they drop down into the trees like pieces of paper, but oftener the final alighting is a combined movement, sometimes in the shape of an inverted cone, — usually in a grand sweep after their most elaborate evolution. Frequently they swoop out from the trees company after company, several times before the last settling, their wings not only making a tremendous whirring, but a perceptible movement of the air. Their chattering keeps up from half to three quarters of an hour after they settle in the trees and their dark little bodies against

¹ Just here let me say that having asked six men of reputed good judgment to give their individual ideas of the number of Swallows when this congregating season is at its height, the average of guesses (for such only could they be) brings the number about thirty thousand, the highest guess being one hundred thousand, the lowest, five thousand. Attempts have been made to photograph them, but at the time when they are best massed and sufficiently near for a photograph, the light is so dim that nothing whatever appears on the film.

the sunset sky look as numerous as the leaves. Often they weigh down a branch and then a great chattering, scolding and re-adjustment ensues. Sometimes there is a movement through the tree-tops to one spot as if a conference were called, and a more surprising amount of chattering than before. Then in a few minutes back they come till the tree-tops are about equally full. The noise which they make is suggestive of the whirring of looms in a cotton mill, heard through the open windows, — or of some kinds of water-falls.

They leave the trees in the morning a little before sunrise. August 26 we watched them go out. At 4.15 there were sounds as if of awakening and gradually the noise increased. At 4.25 they began to arise in companies at intervals of two or three minutes. They did not remain long in the locality and by five o'clock not one was to be seen.

During a heavy wind and rain-storm late one afternoon, the Swallows came about our house and those of our neighbors' on both sides of us, alighting on windows, blinds, cornices, gutters — every conceivable perching place, as well as the trees about the houses. Two electric wires running from one of the houses to the stable, a distance of fifty feet, were literally packed full, great scolding and pecking going on at new comers trying to find a foot-hold. Reckoning at least five to a foot, there were five hundred birds on the wires and they were quite as plentiful on many of the trees and upon the houses. This, and one or two similar occasions, afforded us a good opportunity for verifying our conjectures as to the kinds of Swallows. The greater proportion is Barn Swallows, but there are large numbers of Martins with them and also Bank Swallows. I see no reason why there should not be White-bellied Swallows and Eave Swallows too, as they build about here, but we have not seen them with the others. Swifts frequently fly in and out among the companies as they are gathering and even during some of their evolutions, yet they seem to be on different business, and very important at that, and we have never seen them going into the trees, though several people claim that they roost there.

At the time of the wind and rain-storm mentioned, we had sufficient curiosity to get into water-proofs and rubbers and

visit the roost. Not a bird was to be seen or heard about the trees and the Swallows were still perching upon our house when we went to bed. A gentleman who has a martin-house told us his Martins came back that night, though it had been several weeks since they left. We concluded the probable explanation of the episode was that perching upon the willows in the strong wind was too serious an undertaking and that they had to disband for the night and lodge wherever a safer place offered.

My note-book says: "Sept. 9.—Field glasses revealed only Martins in the group at the willows. These went through the same evolutions as formerly." "Sept. 26.—Birds at willows practically gone. Only about forty left."

This congregating has been noticed for many years; indeed I cannot find in the minds of the oldest inhabitants of our little city of Waterville, a recollection of a summer without them.

We suppose that the time of their appearance, middle of July, is regulated by the nesting season and the strength of the young to accompany their parents; but just why they gather, if such roosts are common, and whether their evolutions are thought to be intelligent and performed with any real purpose, we should be glad to know.

I asked two little urchins one evening what the birds were doing up there. One said, "I guess they're marchin'"; the other, "No, they ain't! I know what they're doin'—they're dancin'."

A NEW SPECIES OF *THRYOTHORUS* FROM THE PACIFIC COAST.

BY A. W. ANTHONY.

A SERIES of Wrens collected the past summer, by Dr. Edgar A. Mearns and myself, on the island of San Clemente, California, prove to be so different from Vigors's Wren of the mainland that I have ventured to describe it as a new species to be known as:—